

Earth's Biological History

8.2 The student will demonstrate an understanding of Earth's biological diversity over time. (Life Science, Earth Science)

8.2.4 Recognize the relationship among the units – era, period, and epoch – into which the geologic time scale is divided.

Taxonomy level: 1.1-A, B Remember Factual and Conceptual Knowledge

Previous/Future knowledge: The geologic time scale is new material for this grade. Further study will take place in high school Earth Science.

It is essential for students to know that the geologic time scale divides Earth's long history into units of time:

- *eras* are divided into *periods*
- *periods* can be further divided into *epochs*

Major information found on the geologic time scale includes:

- Precambrian is the name given to the earliest span of time in Earth history.
- Geologists divide the time between Precambrian and the present into three long units called *eras* (Paleozoic, Mesozoic, Cenozoic).
- The names of the eras are important, as is the order from oldest era to most recent.
- *Eras* are subdivided into units called *periods*.
- Cambrian being the first period is important.
- With a more complete fossil record available, the periods of the Cenozoic era are subdivided further into *epochs*.
- Present day Earth is in the Cenozoic era and the Quaternary period in the Holocene epoch.
- Geologic time has not ended.

It is not essential for students to know the dates involved with each era or period. Students do not need to memorize the names or order of the periods of Earth history.

Assessment Guidelines:

The objective of this indicator is to *recognize* the relationship among the units of the geologic time; therefore, the primary focus of assessment should be to locate this knowledge within the presented material on the relationships among the units (era, epoch, and period) and how they are subdivided. However, appropriate assessments should also require students to *identify* a unit's place in sequence; *recall* the three major era divisions; *identify* the first period of geologic history or the period of present day geologic time; or *recognize* that geologic history is ongoing – it has not ended.